

U.S. Patent No. 6,167,749 B1 to Yanagisawa et al. (hereinafter "Yanagisawa"). This rejection is respectfully traversed.

Claim 1 recites, among other features, a plurality of pressure monitoring devices with different pressure ranges that monitor a pressure in said fuel gas supply channel between said main valve and said shutdown valve, a determination device that monitors a variation of pressure in a sealed space of said fuel gas supply channel formed between said main valve and said shutdown valve after said main valve and said shutdown valve have been closed and determines an operation state of said main valve based on the variation of pressure in said sealed space, wherein in said depressurization treatment, said fuel gas supply channel is depressurized until the pressure enters a pressure range in which the pressure can be monitored in said plurality of pressure monitoring devices. Independent claims 7 and 8 recite similar features.

This rejection is essentially the same as that from the previous Office Action.

Rolker teaches a method of, and apparatus for, testing the tightness of two valves arranged in a fluid line by measuring a pressure condition in the line portion between two valves with both valves being closed at different times (Abstract). The Office Action concedes that Rolker does not disclose a depressurization treatment device as is recited in the pending claims. The Office Action also concedes that Rolker only discloses a single pressure monitoring device. The Office Action relies on Yanagisawa for overcoming the conceded shortfalls in the application of Rolker to the subject matter of the pending claims.

Yanagisawa teaches a method and apparatus for automatically detecting gas leaks from a valve on a gas containing vessel, or the like, based on detected absolute pressure and pressure fluctuation in a room (Abstract). With reference to col. 1, lines 41-50 of Yanagisawa, the Office Action asserts that the teachings of that reference regarding detecting a gas leak in which an airtight area in communication with a valve to be tested is evacuated

and the pressure readings are subsequently taken is considered, by the Examiner, to correspond to features positively recited in the pending claims, which the Office Action concedes that Rolker does not teach.

In this regard, simply because Yanagisawa teaches some pressure monitoring capability, it is not clear that one of ordinary skill in the art would have predictably combined any of the teachings of Yanagisawa with Rolker in the manner suggested by the Office Action with any reasonable expectation of success. Specifically, Rolker is directed to testing the tightness of the two valves by measuring a pressure condition inside a line portion between the two valves with both valves being closed. On the other hand, Yanagisawa wants to detect if a leak is coming from a valve on, for example, a pressure vessel which Yanagisawa refers to as the target object.

The method of Yanagisawa issues a command for forming airtight room communicating with the target object, issues a command for pressurizing the airtight room until a predetermined pressure, and then detecting an absolute pressure and pressure fluctuation of the airtight room measured with a gauge and detecting whether or not there are gas leaks from the target object based on detected absolute pressure and pressure fluctuation. In other words, Yanagisawa makes its determinations based on the environment outside the valve of the gas containing vessel, not in any line associated therewith. It is not clear given any teaching of Yanagisawa that Rolker could even be modified to accept such teaching without impermissibly modifying the principle of operation of the Rolker device. Certainly, it is clear that the only evidence that is provided that these references are combinable in the manner suggested, is the conclusory statement made in the Office Action that it would have been obvious to combine the references "to lower the pressure (depressurize) of the supply channel to the desired pressure for monitoring via means of monitoring devices, without having to introduce any additional elements into the test area which could also leak, causing

false results." This conclusory statement fails to meet the applicable standards affirmed by the Supreme Court in *KSR* regarding their being some articulated reasoning with some rationale underpinning to make the asserted combination. Further, it is not even clear how a depressurization device could be applied to Rolker because Rolker clearly states that the valves are closed at different times and the pressure in the line portion between the valves is measured. There is no predictable reason to depressurize the line between the valves in Rolker and such has not been adequately shown.

In Applicant's March 24 response to the previous Office Action, Applicant argued that there is nothing in Yanagisawa to suggest a plurality of pressure monitoring devices with different pressure ranges. Simply because Yanagisawa teaches use of multiple pressure gauges to measure the pressure at different points, there is no suggestion that the pressure gauges would have different pressure ranges. The conclusory assertion that "[s]ince the pressure can fluctuate, it would have been obvious to one of ordinary skill in the art at the time of the invention to use more than a single pressure gauge, with different ranges, in the system to look out for higher or lower gas ranges than average" is simply not supported by any disclosure in either of the Rolker or Yanagisawa references. This conclusion calls for an overly broad interpretation of what is reasonably suggested by Yanagisawa.

In responding to those arguments, this Office Action asserts that "[s]pecifically, the teaching of multiple devices to detect multiple pressure in multiple ranges, while included in the specification of the present application, was in fact well known in the art at the time of the invention." Other than this conclusory statement, no objective evidence of record is provided to support this conclusion regarding what one of ordinary skill in the art may have known at the time of the invention. Certainly, however, Yanagisawa does not suggest such a conclusion. The Response to Arguments section of the current Office Action goes on to state that "[t]he teachings of Yanagisawa regarding the fluctuation of pressure within the airtight

room does in fact allow one of ordinary skill in the art to realize the benefits of a second gauge with a different pressure range for the measuring of leaks at a different pressure due to simply the understanding that accuracy at lower pressure levels would be greatly increased by a lower level pressure gauge." Again, this requires an overly broad reading of the disclosure of Yanagisawa. In this regard, it is more reasonable to conclude, particularly from the explicit disclosure at col. 3, lines 27 and below, that multiple pressure gauges P1 to P3 are also selected to have equivalent pressure ranges with specified measuring accuracies. In other words, Yanagisawa teaches that regardless of the pressure range, an appropriate accuracy can be found to cover the expected ranges within which the substantially identical gauges in Yanagisawa are designed to operate. The Office Action as much as concedes this as the Response to Arguments continues wherein it states "[w]hile Yanagisawa does not explicitly teach multiple gauges at different pressure ranges it does teach the use of multiple gauges and the reasoning as to why multiple ranges would be beneficial." The last portion of this conclusory statement is simply not supported by the Yanagisawa reference. Again carefully reviewing the cited portion finds support for conclusion that each of the gauges in Yanagisawa would cover the same range to a specified degree of accuracy. This conclusion also rebuts the argument on page 3 regarding accuracies. All that the argument presented in the paragraph beginning "regarding the third argument of the remark ..." is what is already confirmed by Yanagisawa. That is that given a specific requirement, all of the gauges in Yanagisawa, working within the same pressure ranges, would have been selected to have a specified accuracy.

Applicant's representative presented the above arguments to Examiners Shabman and William during the October 15 personal interview. Examiner William indicated that there may not be support for the conclusions made in the Office Action based on the positive

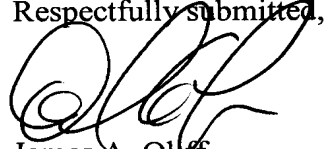
assertions presented in the Yanagisawa reference. Examiner William invited Applicant to formally submit these arguments once again on the record for further consideration.

In view of the foregoing, to any extent that Rolker and Yanagisawa may even be combinable in the manner suggested by the Office Action, a conclusion that Applicant does not concede for at least the reasons stated above, no permissible combination of these references can reasonably be considered to have suggested the combinations of all of the features positively recited in independent claims 1, 7 and 8. Further, claims 2-6 and 9 also would not have been suggested by this combination of references for at least the respective dependence of those claims directly or indirectly on allowable base claims, as well as for the separately patentable subject matter that each of these claims recites.

In view of the foregoing, Applicant respectfully submits that this application is in condition for allowance. Favorable reconsideration and prompt allowance of claims 1-9 are earnestly solicited.

Should the Examiner believe that anything further would be desirable in order to place this application in even better condition for allowance, the Examiner is invited to contact Applicant's undersigned representative at the telephone number set forth below.

Respectfully submitted,



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JAO:DAT/cfr

Attachment:

Petition for Extension of Time

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